

On Establishing Statistical Correlation in the Emittance Growth measurements.

Figures two and 3 in the main document shows scatter plots. There both fluctuation within a store, and large store to store fluctuations. Jean Slaughter suggested we compute the correlation coefficient and/or make a fit for each individual store. If such a correlation exists, the slope of these linear fits must be significant.

This is indeed the case. Figure 1 in this addendum refers to the fitted slopes for the same scatter plot as presented in figure 2 of the paper, estimated store by store. The errors on these slopes are purely statistical: Origin 7 fits automatically adjust the variance in the data such as the χ^2 of these fits is “1.”

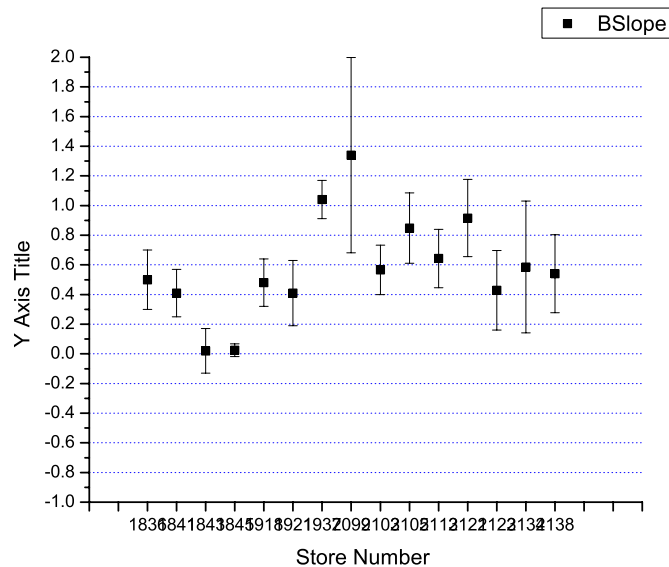


Figure 1

Figure 2 refers to figure 3 in the paper. All slope are significantly (in a statistical sense) positive. Note that store 1918 is off-scale: the slope is much too high. The Sync Light reported anomalously low beam width, for an unknown reason.

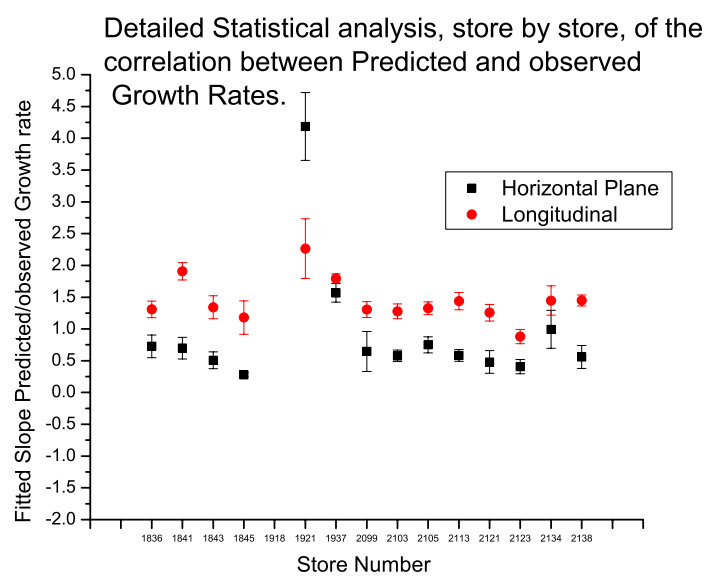


Figure 2